

# RUTGERS UNIVERSITY

# EQUINE SCIENCE QUARTERLY



From Our Stable To Yours  
Summer 2020

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## Rutgers Giving Day 2020: How The Equine Science Center Was Able To Rise To The Challenge

Last year for Rutgers Giving Day, the Equine Science Center was able to raise over \$30,000 for equine projects and research.

Coming off such a phenomenal fundraising year, the Equine Science Center was excited to participate in this year's Rutgers Giving Day but plans suddenly changed with the rise of COVID-19.

While originally scheduled for March, once COVID-19 caused the University to move classes and offices to a virtual setting, the campaign was postponed.

The Rutgers University Foundation wanted everyone to focus on safety and making sure that their families were settled into this "new normal" before such a campaign could take place.

After re-imagining what this campaign would look like, Rutgers eventually decided to schedule

Rutgers Giving Day for the summer.

The focus of this year's Rutgers Giving Day moved from some of the more traditional fundraising projects, to projects that focused on combating COVID-19, funding students who would be affected by the virus (both directly, or through ancillary issues such as paying for things like housing, food, etc.) and finally to raise money for projects that will be affected by potential decreases in funding over the next year or so.

While in years past the Center has continuously raised the largest amount from any unit within the Rutgers School of Environmental and Biological Sciences and New Jersey Agricultural Experiment Station, this year the Center set a smaller goal of just raising enough money to meet a Challenge Match that was given to us by UMH Properties, Inc.; on behalf of Mr. Sam Landy, one of the

# From The Clubhouse



**We can't wait to share  
the launch of our  
two new initiatives,  
"Equine Trivia Tuesdays  
4KIDS!" and our Fall  
2020 Webinar Series!**

Dear Friends,

I hope you and yours are all healthy and safe as you read this column. We certainly are in difficult times and I wish you all the best as we move forward during this pandemic together. Our horses and pets can be comforting to us during tough times; I know I would not be able to cope with the daily stress of Covid-19 if it were not for my horses. I even go to see my former race mare Jolee on the occasion I get to New Brunswick.

As mentioned last time, teaching remotely has its challenges, especially for those of us who are technologically challenged. How many meeting platforms are there? I have been using too many for my taste personally, but at least we are still able to connect with you!

Speaking of connecting, I was asked to lecture virtually for the Brazilian Association of Equine Veterinarians on July 10. The title was "Equine Welfare: a New World for Equine Athletes". My host was Dr. Helio Manso Filho, a former Ph.D. student of Dr. McKeever's who spent six months this past fall and winter with us on sabbatical from the Federal Rural University of Pernambuco. Look forward to a story about him in our next newsletter!

I look forward to sharing this "Equine Welfare" lecture with you at an upcoming meeting, be it face-to-face or remotely. Rutgers University has announced that most of our teaching will be done remotely for the fall semester and we have

only recently being granted permission to return to our research.

Those of us at the Equine Science Center have kept busy over the past four months. While we miss our undergraduate students, our faculty, graduate students, and staff have strived to keep you informed on a variety of topics.

Our weekly "Keeping Engaged While Keeping Safe" initiative, posted every Friday, shares links from our archives of fact sheets, podcasts, webinars, and blog posts around a different theme each week. Check them out on our Website under the "**Whats New**" section.

We also held our Summer Showcase virtually on July 17. Highlights included the traditional treadmill demo, tour of the Equine Exercise Physiology Lab, an anatomy lesson by Dr. Carey Williams, a new game on biosecurity from Jennifer Weinert, and a peek at the current research by Ellen Rankins, which was presented at the virtual American Society for Animal Science meeting on July 21.

Regarding Ms. Rankins' research, in May, the Rutgers University Board for Equine Advancement announced that its primary fundraising initiative for the next two years would be the project focused on the use of Equine Assisted Activities and Therapies (EAAT) with veterans with PTSD. On June 17, Rutgers Giving Day, over \$30,000 was raised in a 24 hour period for this project. THANKS to all who supported this worthy initiative. Take a look at the story on the **Front Page**.

Finally, I wanted to make sure that everyone knows about two new initiatives that we are launching this month. We will be launching "**Equine Trivia Tuesdays 4KIDS!**" this week, holding trivia nights each Tuesday in August at 7:00pm for our young equine enthusiasts between the ages of 8 - 16. For our older equine enthusiasts, we are launching a Fall 2020 Webinar Series. I will kick off the series with a discussion on "The Older Horse" on August 13th, and we will conclude the series with a live "Ask The Expert Panel" on November 5th. Make sure to check our Facebook for more details as we get closer to launch.

I miss seeing you all in person and hope to once again do so soon. In the meantime, stay healthy and safe and enjoy your four-legged friends!

All the Best,  
karyn

# PARTNERS



New Jersey Farm Bureau's primary purpose is to represent the overall interests and improve the financial well-being of farmers and our \$800 million industry. NJFB activities are supported through voluntary membership and annual dues. Members have access to:

- Staff assistance on farming issues and regulatory problems.
- Educational workshops on topical issues such as farm labor, wildlife damage, and zoning.
- Weekly updates on legislation news and regulations affecting all aspects of farming.

It pays to be a NJ Farm Bureau member! For a full list of membership levels and benefits, or to sign up, visit: [www.njfb.org](http://www.njfb.org).



UMH Properties, Inc., is a real estate investment trust that owns and operates manufactured home communities in seven states throughout the northeast.

UMH has been in business since 1968, operating as a public company since 1985. Owning a portfolio of over 90 manufactured home communities, housing approximately 15,700 home sites.

In addition, owning over 810 acres of land for the development of new sites. It is our mission as a company to provide the best quality affordable home for the hard working residents of Pennsylvania.

UMH communities are perfect for residents of all ages, let us help up you find your dream home today.

For more information about UMH Properties, Inc., please visit: [www.umh.com](http://www.umh.com)



The New Jersey Department of Agriculture (NJDA) is an agency which oversees programs that serve virtually all New Jersey citizens. One of the Department's major priorities is to promote, protect and serve the Garden State's diverse agriculture and agribusiness industries.

In addition to the programs we offer to support production agriculture, NJDA also manages programs that feed schoolchildren, distribute surplus federal foods to soup kitchens and pantries that serve our needy citizens, conserve precious soil and water resources, protect farmland from development and preserve it for future agricultural use, expand export markets for fresh and processed agricultural products, and promote our commercial fishing industry, and administer the complete program of agriculture, food and natural resource education, which includes the State FFA Association.

For more information about NJDA, please visit: [www.nj.gov/agriculture](http://www.nj.gov/agriculture)

## UPCOMING 2020 EVENTS

### Equine Trivia Tuesdays 4KIDS!

*Tuesday, August 4, 2020*

Are you between 8 - 16? Join us each Tuesday in August from 7:00pm - 8:00pm. With parents permission, please register at:

<https://go.rutgers.edu/TriviaAug2020>

### Equine Trivia Tuesdays 4KIDS!

*Tuesday, August 11, 2020*

Are you between 8 - 16? Join us each Tuesday in August from 7:00pm - 8:00pm. With parents permission, please register at:

<https://go.rutgers.edu/TriviaAug2020>

### Equine Science Center 2020 Webinar Series: The Older Horse

*Thursday, August 13, 2020*

Save The Date!  
The Equine Science Center is launching a Fall 2020 Webinar Series. Details will be posted to Facebook

[esc@njaes.rutgers.edu](mailto:esc@njaes.rutgers.edu)

### Equine Trivia Tuesdays 4KIDS!

*Tuesday, August 18, 2020*

Are you between 8 - 16? Join us each Tuesday in August from 7:00pm - 8:00pm. With parents permission, please register at:

<https://go.rutgers.edu/TriviaAug2020>

For more events, visit our website @ [esc.rutgers.edu](http://esc.rutgers.edu)

# Rutgers Giving Day 2020: How The Equine Science Center Was Able To Rise To The Challenge

Continued from Pg. 1



*With the newly created “Equine Science Center Research Fund,” the first funded project will examine muscle tension, co-regulation, and stress markers in horses and veterans participating in equine assisted activities and therapies (EAAT). Pictured above, measurements are captured via electromyography (EMG) units which are attached to the horse and measure muscle electrical activity.*

board members of the Rutgers University Board for Equine Advancement (RUBEA).

In order to receive the match, the Center was challenged to raise \$10,000 from donors, which would be matched for a grand total of \$20,000 for the day.

The fund that the Center decided to raise money for was the newly created “Rutgers Equine Science Center Research Fund.”

By creating a separate fund that wouldn't be tied to yearly budgets but would rather be funded by donations and gifts, this allows the Center to conduct vital research no matter what the yearly operating budget may look like.

The first project that this new fund will highlight would be the research study on the effects

of equine assisted activities and therapies (EAAT) on the well-being of veterans with post-traumatic stress disorder (PTSD).

A Ph.D. project by Ellen Rankins (the Ph.D. student of Kenneth McKeever and Karyn Malinowski), her work will build upon the pilot study conducted by her mentors and focus on the horse/human bond, and how these two interact with one another.

With the newly created fund, and the project to highlight selected, preparation was then started by the Center's Public Relations Specialist, Kyle Hartmann, to create a plan of how to engage the Center's constituents, equine science alumni, and current students and student staff.

While years past focused on organizing and

planning the day-long event of social media challenges, Hartmann had to navigate the changes of getting donors engaged during the challenging times that we are all facing.

With a renewed focus on one-to-one interactions, Hartmann worked with many of the RUBEA Board Members on best practices for reaching out to their contacts and how to speak to the importance of equine assisted activities and therapies (specifically on the immensely important population of veterans).

Starting at midnight on June 17th, student staff, alumni, RUBEA Co-Chair Dr. Amy Butewicz, and Hartmann all kicked off the event by competing for the Rutgers Giving Day “Kick-off Challenge.” While the Center didn’t win this challenge, it provided a great start to the fundraising for the day.

Leading up to Rutgers Giving Day, the Center also promoted the project by issuing a press release announcing the new “Rutgers Equine Science Center Research Fund.” This promotion helped to bring in new donors and engaged constituents; providing not only monetary support, but also awareness of the Center’s research projects.

Throughout the day, students & staff posted social media posts on multiple platforms, talking about the people, and horses, that have made a significant impact on their lives during their time at Rutgers. This not only speaks to opportunities given by having a center such as the Equine Science Center, but also the dedication of the equine community in New Jersey.

As the day carried on, the Center was happy to reach the initial Challenge Match, with Landy and UMH Properties, Inc. matching our first \$10,000 for a total of \$20,000, but was ecstatic as the donations kept on coming in.

With all of the hurdles of raising money during these difficult times, including having to reschedule Rutgers Giving Day to begin with, the Center was able to raise over \$30,000 with the help of Landy’s donation.

“We truly couldn’t have done this without the phenomenal support of our Equine Science Center family,” said Center Director Karyn Malinowski. “It is through this support that the Center is able to fulfill its mission of ‘Better Horse Care through Research & Education.’”



*The Center received over 76 donations (some were sent in via check) for a grand total of over \$30,000 for the second year in a row. This year the funds were put into a newly created “Equine Science Center Research Fund.”*

**For more information on how to donate to the Equine Science Center Research Fund, please visit: <http://give.rutgers.edu/escresearch>**



In 2019 as a part of their monthly club meeting, the Whoa and Go Horse Club participated in a "Favorite Breed Presentation" to showcase the horse breed that they liked best. - Photo Courtesy of Christine Cardinal.

# Meet The Whoa And Go Horse Club: How A 4-H Horse Club From Mercer County Is Staying Engaged!

**A**s many of us have had to adjust to the “new normal” or working from home, learning from home, and interacting with friends from home (virtually), there have been challenges.

Whether it is finding out your internet speed isn't what you thought it was (something that even a member of the Equine Science Center staff figured out first hand) or learning that your family members aren't necessarily the best “co-workers” throughout the work week, we have all had to acclimate to our new environments.

For some, this has been a challenge faced with excitement and ease. As many of you know (or should know considering you are reading it) the Equine Science Center releases a quarterly newsletter to update its constituents on events, programs, projects, and research.

In the 2020 Spring Newsletter an article about New Jersey's state animal, the horse, caught the eye of Christine Cardinal, one of the co-leaders of the Mercer County 4H Whoa and Go Horse Club.

The Whoa and Go Horse Club started around

2018 after an existing 4-H club, Boltin' Colts, lost its leader and needed a new home base. Adriane Fried, who had previous experience working with 4-H groups, was approached to take over the group as the organizational leader; and Cardinal, who is the Director of the Mercer County Stables was approached to see if she could help, with Cardinal serving as a co-leader and Mercer County Stables serving as a new home base.

Both Fried and Cardinal were more than happy to sign on. Fried would offer the experience working with and organizing a 4-H club, and Cardinal would provide the home base and her horse experience.

While the group started with a small (but highly dedicated) group, they now have an active membership of 11 club members.

During the pandemic Cardinal and Fried wanted to continue working with their members while at the same time putting safety at the forefront of any decisions that they would make. Like the rest of the world, virtually meeting was decided upon as a way to keep safe, but to also stay engaged with their group.

"When the pandemic hit, the shutdowns started, in-person programs canceled, we all had to change how we worked, lived, and socialized. Parameters wisely set by Rutgers put our club meetings on hold, then we learned about Zoom," said Cardinal. "We had our first Zoom club meeting in April, just to check in with the kids and it gave everyone a chance to say 'hi' to each other. Trying to keep a bit of normalcy, I emailed activity and work sheets to the members for them to complete and for us to talk about at our May meeting."

As she prepared for the May meeting, the 2020 Spring Equine Science Quarterly newsletter was sent out. Reading through it, something that she says helps to stay engaged with the Center and its research, she came across the article on the New Jersey state animal.

After reading the article, Cardinal decided to create an activity to get the 4H Whoa and Go Horse Club members to engage with the newsletter. She

encouraged the group to read the newsletter, but to particularly focus on the article about New Jersey's state animal.

They would then be asked to draw New Jersey's State Flag or New Jersey's State Seal, create a piece of art with a horse in it, or to write a story about their favorite or most memorable experience with a horse or at a horse barn. The club members were excited to participate, and at their June meeting presented their artwork and story.

After seeing what the club members were able to accomplish, Cardinal reached out to the Equine Science Center to share their story. "We were so excited to see these young equine enthusiasts engaged in our work" said Center Director Karyn Malinowski. "After seeing the artwork that was shared with us, we knew we had to share it with others." It was decided to feature them in the next Equine Science Quarterly newsletter and include their projects.

What is also commendable is the partnership that has been created between this group and the Mercer County Park Commission via the Mercer County Stables.

Originally named the Mercer County Equestrian Center when it opened to the public in



*As a part of the 2018 Mercer County Fair, a Grooming demonstration for the public was put on by a member of the Whoa and Go Horse Club. - Photo Courtesy of Christine Cardinal.*

For Release



Ph.D. Candidate Ellen Ranks placing EMG units onto one of the Equine Science Center research mares.

Lab Notes - McKeever

# From The Lab: Muscular Tension as a Marker of Stress in Horses



THE TOP 5  
TAKE-A-WAYS

**#1** Results also suggest the expression of markers of stress in horses is dependent on context.

**#2** Social isolation altered muscle activity in the cervical trapezius, a shoulder muscle.

**H**umans oftentimes respond to stress by increasing muscular tension. You may have experienced this phenomenon yourself after a stressful test or traffic-filled commute. The feeling of tension is most common through the jaw, neck, and shoulders.

The purpose of the study "Muscular Tension as a Marker of Stress in Horses" was to investigate whether horses respond in a similar manner to stressful conditions.

The study, conducted with the research horses at the Equine Exercise Physiology Lab, compared behavioral and muscular responses from horses exposed to four conditions – control, social isolation, novel object, and sham clipping.

Horses were loose in their box stalls with companions in the surrounding stalls for the control period.

During social isolation, the

companion horses were removed from the surrounding stalls.

Horses were led onto a tarp by a handler in the novel object exposure.

The same handler held the horse and applied clippers to the left and right sides of the horse's neck in an alternating pattern.

The total number of stress-related behaviors increased during social isolation. Measures of muscle activity collected via surface electromyography (EMG) in the masseter, a jaw muscle, increased during sham clipping. Social isolation altered muscle activity in the cervical trapezius, a shoulder muscle, with a measure of amplitude increasing and a measure of frequency decreasing.

These results demonstrate that muscle activity can be used as a marker of stress in horses. Results also suggest the expression of markers of stress in horses is dependent on context.

**#3**

**Social isolation resulted in more stress-related behaviors.**

**#4**

**Muscle activity of the masseter, measured via surface EMG, increased during sham clipping.**

**#5**

**Results demonstrate muscle activity can be used as a marker of stress in horses.**

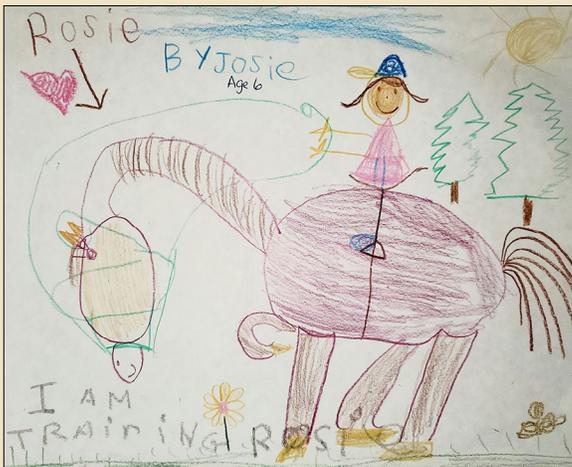
# Equine Artist Corner

As a part of their monthly meetings, the Whoa and Go Horse Club created artwork, and one member even wrote a story about New Jersey's State Animal, the horse. Over the next few pages please enjoy their artwork and story.

When I go to Germany every year for a few weeks I see my cousin Jenny. Jenny has a mother, father, and older brother. The family has around 30 horses, which is why I like to go there a lot. Last time I was there, I had a cast on my arm, so I had to ride one-handed with Jenny leading the horse. Now, even if I had to ride one-handed it wouldn't be that hard because I've had the experience. The horses were very gentle and nice. They also had other animals on the farm besides horses. They had pigs, maybe a few goats, and the cutest of them all: miniature ponies. This might not be my favorite memory but it is a special one.

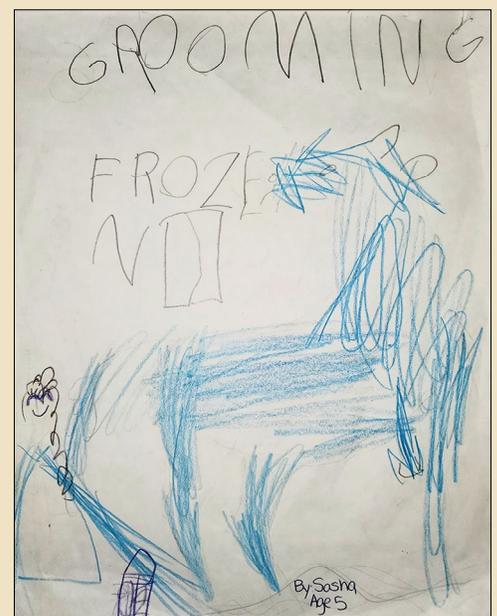
- Kaede S. (Age 10)

Lillian (Age 9): I like that we get to do things with the horses at the stable. I've really learned a lot about horses!

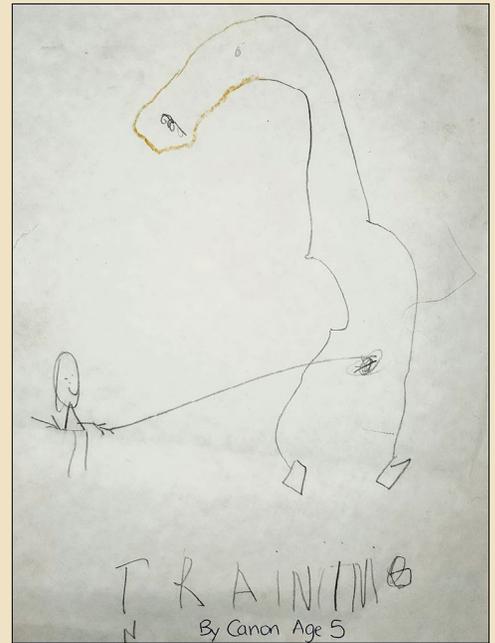


Josie (Age 6): When we go to 4H meetings, I always get excited when we groom horses and clean their stalls. I fell in love with a horse that nudged me one time. Its name was Tempest and every time I go to the stables for a 4H meeting, that's the horse I always want to see. I love being a part of our club for the 4H Fair because we get to share our love of horses with other people. It makes them smile, and it makes me smile, too!

Sasha (Age 5): I like the jobs we do in our club like brushing horses, grooming, sweeping, and giving them hay. I learned that horses can kick so you have to be safe at all times. I also learned they have a dock, hock, and forelock. On their hooves, they have a sole and a white line and a hoof wall. They also have a cannon bone. If I wasn't in the club, I would not know those things!

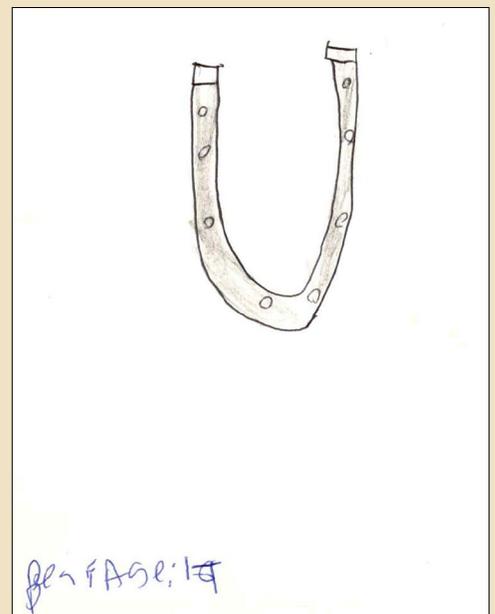


Canon (Age 5): I like visiting the horses and grooming them at the meetings. 4H taught me that if you have a horse, you have to take care of it. I also learned about the different types of trailers that horses can ride in - tagalong and gooseneck. At our stables, they have a lot of gooseneck trailers. I wouldn't know all that if it wasn't for 4H!



Jaxie (Age 5): In 4H, we help horses by cleaning their stalls and giving them hay. I love the meetings because we make treats for them and learn about what they eat. They eat a lot of the same things we do! I love zebras and I learned how they are just like horses ~ but different, too! We have so much fun in our club.

Ben: The reason I joined Whoa and Go is because Adrienne is the leader and I like horses! The thing I like best is learning how to groom a horse properly!





Annika (Age 9)

**A huge thanks to all of the Whoa and Go Horse Club Members who participated and shared their projects with us! We can't wait to see what other fun and educational projects they are working on!**



Whoa and Go Horse Club Co-leader Adrienne Fried and club members welcoming visitors to our tent. - Photo Courtesy of Christine Cardinal.

1996, in 2018 its name changed to Mercer County Stables to better reflect their mission.

“Our mission is to provide inclusive equine based recreational and educational programs that improve the emotional, physical, and mental health of Mercer County’s residents,” says Cardinal. “Thanks to County Executive Brian Hughes’ continued support, as well as the County Freeholders, our Executive Director Aaron T. Watson, and Park Commissioners; Mercer County Stables offers a wide variety of inclusive equestrian based public programs.”

Since 1996 the stable has seen two major renovations. In 2017, new stall windows were installed, providing better ventilation for the horses; 20 stalls, a tack room, and two wash stalls were added on the main barn’s east side; and siding and roofing was replaced. The second major renovation is currently taking place.

“Mercer County is again investing in our facility this year. The second phase of the renovation

project is currently underway on the west side of the main barn,” says Cardinal. “A large viewing and educational room, restrooms, office space, and an employee area are being added.”

Cardinal is excited to be able to offer her 4-H club members a place where they can come to learn about and interact with horses in these new facilities (once they are able to meet in person again safely).

Working in the N.J. equine industry since 1988, Cardinal has learned that you never stop learning about horses.

“The key is to want to learn” says Cardinal. “The internet made it easier and faster to get information, and the Equine Science Center has always been one of my “go to” sites for great information. Honestly I don’t know exactly how long that I have been getting information from the Rutgers Equine Science Center, but I know it’s been a long time!”



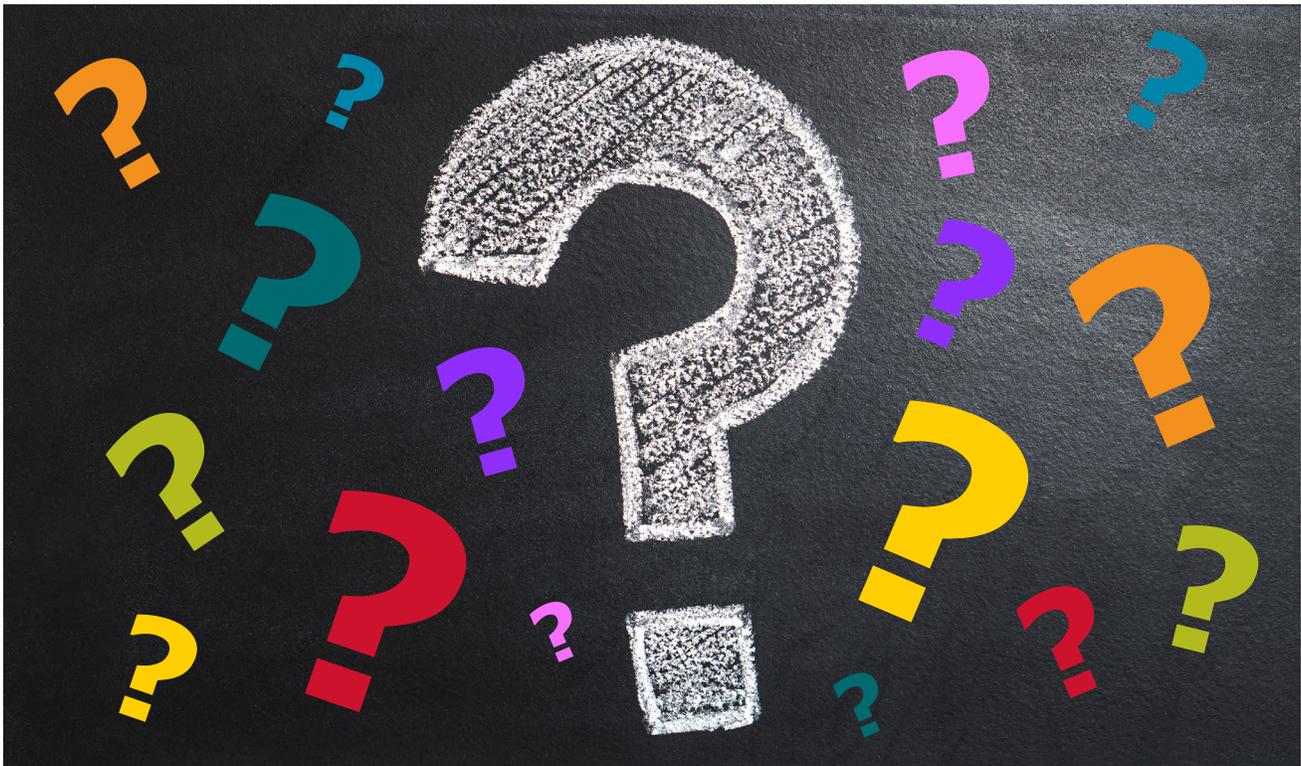
**RUTGERS**

New Jersey Agricultural  
Experiment Station  
EQUINE SCIENCE CENTER



The Equine Science Center Presents:

# Equine Trivia Tuesdays 4 KIDS!



**RU between the ages of 8-16?**

**Join Us Every Tuesday in August for Equine Trivia!**

**Topics Include:**

**BIOSECURITY - EQUINE ANATOMY - BASIC NUTRITION - EQUINE BEHAVIOR**

**And The Best Part ... There Will Be Prizes!!!**

**To REGISTER GO TO: <https://go.rutgers.edu/TriviaAug2020>**

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